

**Abstract of the Disclosure**

An apparatus and method generating an optical pulse of picosecond class (having a high duty ratio), which 5 accurately and stably operates at an arbitrary repetition frequency, has a high OSNR, and is not restricted by an RF modulation frequency, are provided. New modulation spectrum components are generated by performing phase modulation for light output from a single wavelength 10 laser light source with an optical phase modulator. The phases of the modulation spectrum components are aligned by a phase adjuster, so that a pulse wave in a time domain is generated.